



Systematically Analyzing Cognitive Testing Results

YES...but will it work in real life?

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Challenge

Can we be more systematic about our approach to cognitive testing results

IN OUR “REGULAR” STUDIES



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What does CSR do now?

- Use specially trained interviewers
- Semi-structured protocol with goals and probes



EXAMPLE

Which of the following is an effective treatment for relieving the pain of hip osteoarthritis?

- ☐ Exercise
- ☐ Physical therapy
- ☐ Pain medications
- ☐ Any of the Above (CORRECT ANSWER)
- ☐ I am not sure

COGNITIVE GOALS

- How does R define “effective” treatment?
- What time period is R thinking about?
- What does R include as “pain medication” (only prescription?)

- *Do you think Q is asking about long-term or short-term pain relief?*
- *What does it mean that the treatment is “effective”*
- *What kinds of pain medication were you thinking about? (Did you think about prescription pain meds and over-the-counter meds?)*



What does CSR do now?

- Use specially trained interviewers
- Semi-structured protocol with goals and probes
- Debrief interviewers at end and ask them to turn in a summary of their findings



1. Change how we probe

Interviewers should probe until they are confident they could address each of the 4 cognitive tasks: comprehension, retrieval, transformation, and providing an answer



Changing Probing: Can we do this?

Yes

Can add these tasks to the “goals” for each question



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EXAMPLE

How much support do you think the hospice care team gives your family or those close to you?

- ☐ Less than they need
- ☐ About the right amount
- ☐ More than they want

COGNITIVE GOALS

- How does R understand this question?
- How does R understand “hospice care team”? (Who does R include?)
- Do the answer categories work?
- Can R answer this question? (Does R know about support to family?)
- What kind of support did R get/from whom? (only Hospice help?)
- Who is R thinking about? (Is there family or someone close?)



2. Independent coders

Coders listened to tape recordings and coded whether or not there was or was not a problem with each of the cognitive tasks



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Coder Issues

- Who
 - External to project?
 - Project staff?
 - Cognitive interviewers themselves?
- Training
- Cost

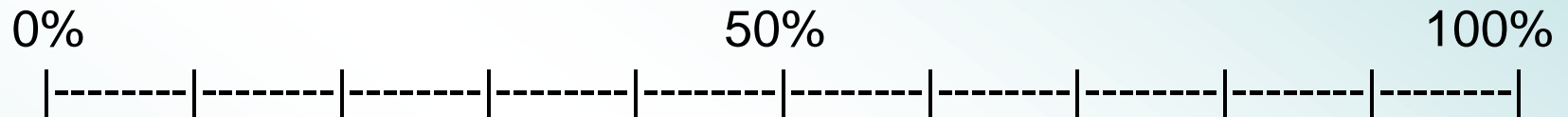


Coder vs. Interviewer

- 640 possible cognitive task codes
 - 10 Q x 4 tasks x 16 interviews
- 20 direct mismatches (Yes vs. No)
- 39 mismatches with DK
- Most mismatches – knowledge & transformation
- Interviewers used DK more than coders



In the last month, about what percent of the time did you not take your (MEDICINE 2) exactly as your doctor prescribed?



Number who had no problem

	N	Comprehend	Retrieve	Transform	Answer
Independent Coder	15	8	10	8	8
Cognitive Interviewer	15	7	11	9	8



Have someone code interviews:
Can we do this?

Maybe

Depends who we use (and how much
money and time we have)



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3. When do we code?

Original study:

Coders listened to recordings at own pace
over 6+ months



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Timing Issues

- Needs to happen after interviewing
... and before the debriefing
- Time for training
- Time for validation between coders
- Time for analysis



Timing Issues: Can we handle this? Maybe not

Often there isn't a lot of time between cognitive testing and when next draft is due



4. How many do we code?

Original study:

67 interviews completed over 9 months



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Sample Size Issues

Don't really know how many we need

Quantitative results require more to see differences



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Sample Size: Do we do enough? Maybe not

Our studies are usually smaller with
only 5-10 cognitive interviews

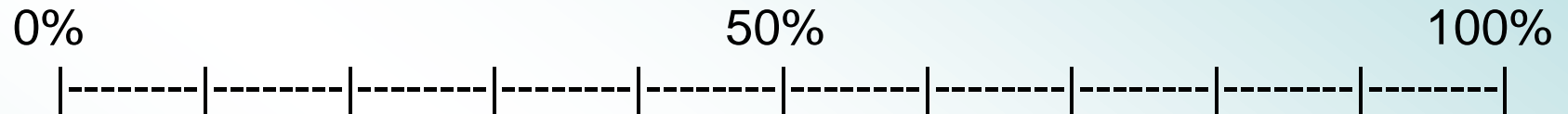


4. What do we learn?

- Like behavior coding – can give us “red flags” for possible problems
- Doesn’t tell us about specific problems or how to fix them
- When looking at types of questions (like original study) it can show differences



In the last month, about what percent of the time did you not take your (MEDICINE 2) exactly as your doctor prescribed?



- From coding:
 - Problems with all tasks
- From debriefing:
 - Found out what kinds of mistakes people were making
 - Heard about frustration level of Rs



Does it work in real life?

- It **is** extra work & money
- There are concerns about timing
- Answers about type of cognitive difficulty – not how to fix the problem



Can we do it?

Probably yes

Currently trying an adaptation

- Asking additional probes
- Having interviewers “code” when they listen to their taped interviews



THANK YOU



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